July 22, 1930. J. R. COTTER 1,771,325

ADJUSTABLE HANDLE

Filed Jan. 25, 1928

Fig. 1,

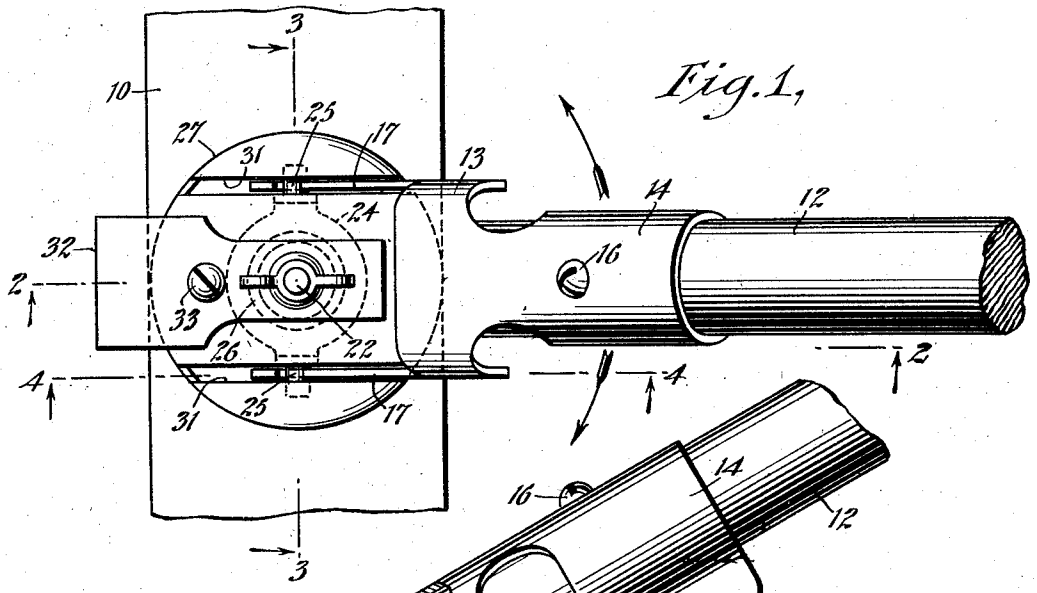


Fig. 2,

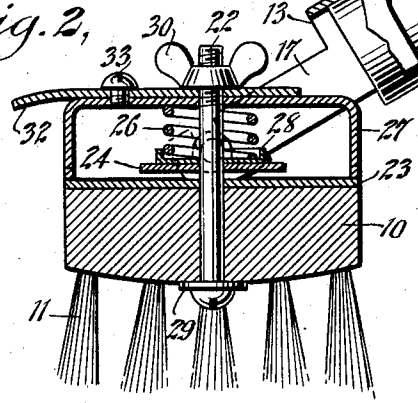


Fig. 3,

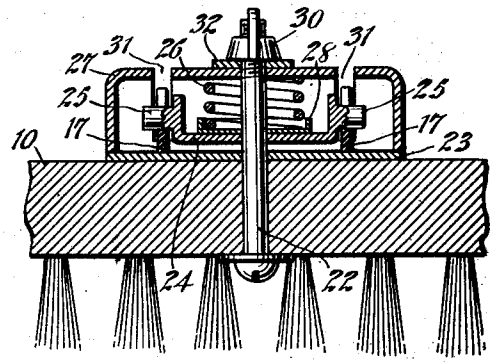
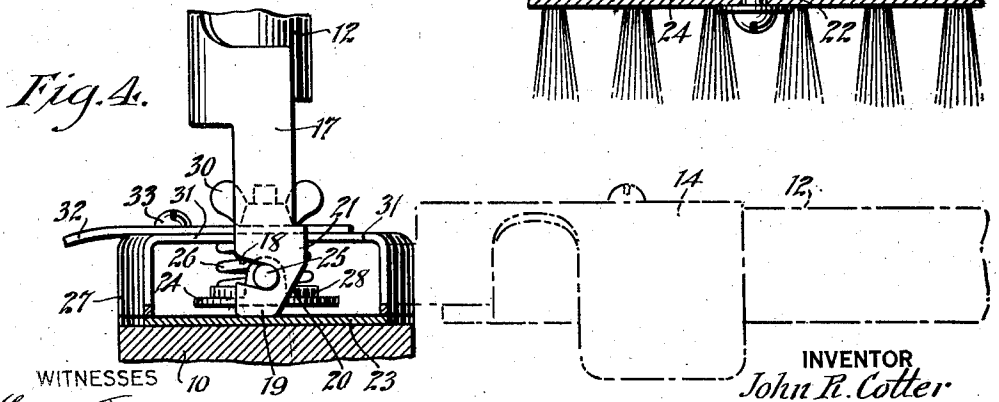


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE

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ADJUSTABLE HANDLE

Application filed January 25, 1928. Serial No. 249,431.

This invention relates to an improvement in brushes, mops and closely analogous articles, and relates more particularly to handle connecting means for such articles.

The principal object of the present invention is to provide in an article of the indicated character, practical and improved means for connecting a handle with a cleaning element, so that the handle may be releasably held in different angular positions with respect to the cleaning element, to enable a person to more conveniently and expeditiously carry out cleaning operations.

With the foregoing and other objects in view, the invention resides in the particular provision, construction and functions of the parts hereinafter fully described and illustrated in the accompanying drawing, in which—

Figure 1 is a plan view showing the present invention applied to a brush, only portions of the bristle carrying head and the handle being shown.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1, showing the handle vertically disposed in full lines, and horizontally disposed in dot and dash lines.

Referring now more particularly to the several views of the drawing it will be apparent that there is shown the cleaning element of a brush which consists of a stock or head 10, and the usual bristles 11 secured to the head 10. Cleaning elements of this type are made of different sizes, and some are extremely long in order to move in contact with a large area of a floor for instance.

In order that such cleaning element may be disposed at different angles with respect to the handle designated 12, to enable a person to more conveniently, effectively and expeditiously carry out cleaning operations, particularly in out-of-the-way places, there is provided between the handle 12 and the head 10 means presently to be described. An attachment 13 is employed which is adapted to be connected with one end of the handle 12 which will be in the form of a staff or rod. The attachment 13 is of integral construction and includes a clamp 14 adapted to embrace the handle end, a suitable clamping element 15 being uesd for setting up the clamping action, and a fastening element such as a screw 16 serves for preventing turning movement of the attachment. The attachment 13 also includes members 17 carried by the clamp 14 and arranged in spaced relationship, and each of said members 17 is so formed as to provide a slot 18, a toe 19, a sole 20, and a heel 21. A bolt 22 is arranged on the head 10 and serves as an arbor or pivot. A metallic disk 23 surrounds the bolt 22 and is secured to the head 10. A pressure member 24 is arranged on the bolt 22 above the disk 23, and said member 24 has arbors or trunnions 25 which are arranged diametrically opposite each other in axial alignment. The arbors 25 are respectively receivable in the slots 18 in the members 17. A compression spring 26 surrounds the bolt 22 between a cap 27 and a flanged disk 28. The disk 28 is arranged on the bolt 22, is in contact with the member 24, and serves to hold the lower end of the spring 26 in place. The bolt 22 extends through a hole in the cap 27 and the cap is held in place by a washer 29, and a wing nut 30, the latter adapted for threading engagement with the upper threaded end of the bolt 22. The cap 27 has slots 31 which respectively accommodate the members 17 and permit pivotal movement thereof, and therefore pivotal movement of the handle 12.

From the foregoing it will be apparent that there has been described an arrangement of parts whereby the handle may be held in different angular positions with respect to the head 10 of the cleaning element, and may also be disposed in any radial position with respect thereto so as to be disposed laterally with respect to the head 10, or in longitudinal alignment with respect thereto. The handle 12 may be held vertically disposed, in which case, the toes 19 will be in engagement with the disk 23, as shown in Fig. 2. The spring 26 has a normal tendency to exert a downward pressure which will be imparted to the members 17 through the member 24. The handle

12 will be releasably maintained in this position. By placing one foot on the head 10, the handle 12 may be moved to a substantially 45° angle, in which case, the soles 20 of the members 17 will be in engagement with the disk 23, as shown in Fig. 2. Likewise the handle 12 may be moved to a position substantially parallel with the upper face of the head 10, in which case the heels 21 will be in engagement with the disk 23. It will also be understood that the handle 12 may be disposed in any radial position regardless of its angular position.

A scraper 32 is held in place on the cap 27 by the wing-nut 30 and a screw 33. The scraper 32 serves for removing matter stuck to surfaces to be cleaned.

I claim:

1. In an article of the class described, a cleaning element having a rigid head, a fixed plate on the head, an arbor arranged on the head, a member having trunnions arranged for rotation on the arbor, a handle having rigid members respectively engageable with said trunnions whereby the handle may have pivotal movement, a compression spring acting on the trunnion member, means holding the spring in place, and relatively angularly disposed edges on each of the handle members engageable with said fixed plate and cooperating with said spring whereby to releasably hold the handle in different angular positions with respect to the cleaning element.

2. In an article of the class described, a cleaning element, a freely rotatable member mounted on said element, a handle pivotally connected at one end with said rotatable member to change its radial position with respect to said element, said end of the handle being engageable with a relatively fixed portion on said cleaning element, and spring means exerting pressure on said rotatable member to cause the coaction of the pivoted end of the handle and the relatively fixed portion on said cleaning element, to yieldably hold the handle in different angular positions with respect to the cleaning element regardless of the radial position of the handle.

3. In an article of the class described, a cleaning element, a handle, means connecting the handle with said cleaning element whereby to change the radial position of the handle with respect to said cleaning element, and coacting means comprising a rigid member having relatively angularly disposed edges on said handle, a pressure exerting member with which said rigid member is pivotally engaged, and a fixed plate positioned to be engaged by each of said edges carried by said cleaning element, whereby said handle may be moved to and be held in different angular positions with respect to said cleaning element, regardless of the radial position of the handle, subject to the application to the handle of a force sufficient to overcome the holding effect of said coacting means.

Signed at New York, in the county of New York and State of New York, this 24th day of January, A. D. 1928.

JOHN R. COTTER.